

WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

imaging means for imaging an object and obtaining  
moving image data composed of a plurality of frames;

5 storing means for storing additional information  
indicating contents of events that occurred during the  
imaging of the moving image data by said imaging means  
into a storage;

dividing means for dividing the moving image data  
10 for one shot into a plurality of sub-shots based on the  
events indicated by said additional information stored  
in the storage; and

selecting means for selecting a key frame from  
the moving image data of each sub-shot divided by said  
15 dividing means in accordance with the additional  
information.

2. The apparatus according to claim 1, wherein the  
additional information includes an action information  
20 associated with an action which was made during the  
imaging of the moving image data.

3. The apparatus according to claim 2, wherein the  
action information includes information associated with  
25 a zoom action.

4. The apparatus according to claim 1, wherein the additional information includes an environment information associated with an imaging environment during the imaging of the moving image data.

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5. The apparatus according to claim 4, wherein the environment information includes information associated with a pan action.

10 6. The apparatus according to claim 1, wherein the moving image data acquired from the beginning to the end of the imaging by the imaging means corresponds to said one shot.

15 7. The apparatus according to claim 1, wherein the additional information includes an action information associated with an action which was made during the imaging of the moving image data and an environment information associated with an imaging environment  
20 during the imaging of the moving image data, and wherein said selecting means selects the key frame using different criteria depending on whether the key frame is selected in accordance with the action information or the environment information.

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8. The apparatus according to claim 1, further comprising:

detecting means for detecting that the number of sub-shots obtained by dividing the moving image data for one shot is excessive; and

canceling means for canceling division made based  
5 on a predetermined event according to a detection result of said detecting means.

9. The apparatus according to claim 1, further comprising:

10 detecting means for detecting an event type which occurred at a high frequency of occurrence during the imaging of the moving image data according to the additional information stored in the storage; and

controlling means for controlling the division  
15 means so as to stop the division into the sub-shots based on the event type detected by said detecting means.

10. An image processing method comprising the steps  
20 of:

imaging an object and obtaining moving image data composed of a plurality of frames;

storing additional information indicating contents of events that occurred during the imaging of  
25 the moving image data into a storage;

dividing the moving image data for one shot into a plurality of sub-shots based on the events indicated

by said additional information stored in the storage;  
and

selecting a key frame from the moving image data  
of each sub-shot divided by said dividing step in  
5 accordance with the additional information.

11. The method according to claim 10, wherein the  
events include an action information wherein the  
additional information includes an action information  
10 associated with an action which was made during the  
imaging of the moving image data.

12. The method according to claim 11, wherein the  
action information includes information associated with  
15 a zoom action.

13. The method according to claim 10, wherein the  
additional information includes an environment  
information associated with an imaging environment  
20 during the imaging of the moving image data.

14. The method according to claim 13, wherein the  
environment information includes information associated  
with a pan action.

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15. The method according to claim 10, wherein the  
moving image data acquired from the beginning to the

end of the imaging of the moving image data corresponds to said one shot.

16. The method according to claim 10, wherein the  
5 additional information includes an action information associated with an action which was made during the imaging of the moving image data and an environment information associated with an imaging environment during the imaging of the moving image data, and  
10 wherein said selecting step selects the key frame using different criteria depending on whether the key frame is selected in accordance with the action information or the environment information.

15 17. The method according to claim 10, further comprising the steps of:  
detecting that the number of sub-shots obtained by dividing the moving image data for one shot is excessive; and  
20 canceling division made based on a predetermined event according to a detection result of said detecting step.

18. The method according to claim 10, further  
25 comprising the steps of:  
detecting an event type which occurred at a high frequency of occurrence during the imaging of the

moving image data according to the additional  
information stored in the storage; and

controlling the division step so as to stop the  
division into the sub-shots based on the event type  
5 detected by said detecting step.

19. A program for controlling an image processing  
apparatus, comprising:

code to image an object and obtain moving image  
10 data composed of a plurality of frames;

code to store additional information indicating  
contents of events that occurred during the imaging of  
the moving image data into a storage;

code to divide the moving image data for one shot  
15 into a plurality of sub-shots based on the events  
indicated by said additional information stored in the  
storage; and

code to select a key frame from the moving image  
data of each sub-shot in accordance with the additional  
20 information.

20. An image processing apparatus comprising:

imaging means for imaging an object and for  
obtaining moving image data composed of a plurality of  
25 frames;

storing means for storing an additional  
information including an action information associated

with actions made during the imaging of the moving image data, and an environment information associated with an image sensing environment during the imaging of the moving image data; and

5           selecting means for selecting a plurality of key frames from the moving image data for one shot according to the additional information stored in the storage,

              wherein said selecting means selects the key  
10 frames using different criteria depending on whether the key frame is selected in accordance with the action information or the environment information.

21.    An image processing method comprising the steps  
15 of:

              imaging an object and for obtaining moving image data composed of a plurality of frames;

              storing an additional information including an action information associated with actions made during  
20 the imaging of the moving image data, and an environment information associated with an image sensing environment during the imaging of the moving image data; and

              selecting a plurality of key frames from the  
25 moving image data for one shot according to the additional information stored in the storage,

wherein said selecting step selects the key frames using different criteria depending on whether the key frame is selected in accordance with the action information or the environment information.

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22. A program for controlling an image processing apparatus, comprising:

code to image an object and for obtaining moving image data composed of a plurality of frames;

10 code to store an additional information including an action information associated with actions made during the imaging of the moving image data, and an environment information associated with an image sensing environment during the imaging of the moving  
15 image data; and

code to select a plurality of key frames from the moving image data for one shot according to the additional information stored in the storage,

wherein said selecting step selects the key  
20 frames using different criteria depending on whether the key frame is selected in accordance with the action information or the environment information.

23. An image processing apparatus comprising:

25 input means for inputting moving image data composed of a plurality of frames obtained by imaging an object;



a storage which stores an additional information indicating contents of events that occurred during imaging of the moving image data;

dividing means for dividing the moving image data  
5 for one shot into a plurality of sub-shots based on the events indicated by said additional information stored in the storage; and

selecting means for selecting a key frame from the moving image data of each sub-shot divided by said  
10 dividing means in accordance with the additional information.

24. An apparatus according to claim 23, wherein said input means includes reproducing means for reproducing  
15 the moving image data from a rerecording medium.

25. An apparatus according to claim 23, wherein the additional information includes an operation information indicating an operation relating to the  
20 imaging of the moving image data during imaging of the moving image data.

26. An apparatus according to claim 23, wherein the additional information includes an environment  
25 information indicating an imaging environment during the imaging of the moving image data.

27. An apparatus according to claim 23, further comprising:

detecting means for comparing the number of sub-shots obtained by dividing the moving image data for one shot and a threshold value and for detecting  
5 that the number of sub-shots is excessive; and

decreasing means for decreasing the number of sub-shots for said one shot according to a detection result of said detecting means.

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28. An image processing method comprising the steps of:

inputting moving image data composed of a plurality of frames obtained by imaging an object;

15 storing an additional information indicating contents of events that occurred during imaging of the moving image data into a storage;

dividing the moving image data for one shot into a plurality of sub-shots based on the events indicated  
20 by said additional information stored in the storage; and

selecting a key frame from the moving image data of each sub-shot divided by said dividing step in accordance with the additional information.

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